DOCUMENT RESUME

ED 429 644 JC 990 225

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TITLE	Placement Decisions for First-Time-in-College Students Using the Computerized Placement Test. Information Capsule.
INSTITUTION	Miami-Dade Community Coll., FL. Office of Institutional Research.
REPORT NO	IC-No-98-12C
PUB DATE	1998-08-00
NOTE	13p.
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Community Colleges; *Computer Assisted Testing; *Developmental Studies Programs; Evaluation; *Mathematics Skills; *Reading Readiness; Remedial Instruction; *Student Placement; Two Year Colleges; *Writing Skills
IDENTIFIERS	Miami Dade Community College FL; *Placement Tests

ABSTRACT

This information capsule explores the effectiveness of score ranges on the Computerized Placement Test (CPT), used to assess the skills of entry-level students at Miami-Dade Community College and place first-time-in-college students in classes. Data are provided for students entering in Fall terms 1996 and 1997 showing the number of students placed into each college preparatory or entry-level course by COT score range, along with the percentage of students who passed the courses. The score ranges were adjusted beginning in July 1, 1997 to reflect new state standards for exemption from preparatory coursework. For most of the courses reported, thé percentage of students passing increased, indicating that the adjusted score ranges may have been more effective in matching students' skill levels with courses, although other factors may have also contributed. Tables report results for four different classes: reading, English composition, college preparatory mathematics, and college level mathematics. Contains 9 tables. (NB)

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ED 429 644

Placement Decisions for First-Time-in-College Students Using the Computerized Placement Test

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MIAMI-DADE COMMUNITY COLLEGE - INSTITUTIONAL RESEARCH

INFORMATION CAPSULE

I.C. No. 98-12C

August 1998

Placement Decisions for First-Time-in-College Students Using the Computerized Placement Test

Summary

This capsule explores the effectiveness of the Computerized Placement Test score ranges used at Miami-Dade Community College to place first-time-in-college students in courses. Data are provided for students entering in Fall Terms 1996 and 1997 showing the number of students placed into each college preparatory or selected entry-level college course by CPT score range and the percent of students passing the courses. The score ranges were adjusted for students testing on or after July 1, 1997 to reflect the new statewide cut scores for exemption from college preparatory coursework. For most of the courses reported, the percent of students passing the courses into which they were placed increased. While this change suggests that the score ranges used for placement in 1997 may have been more effective in matching students' skill levels with courses, other factors may also have contributed.

Background

Miami-Dade Community College uses the Computerized Placement Test developed by the College Board to assess the entry-level skills of degree-seeking students. The test provides an estimate of students' basic skills prior to enrollment in courses. Students are required to take the reading, writing and algebra subtests, with an arithmetic subtest also administered to students scoring into college preparatory level mathematics.

Passing scores which exempt students from college preparatory coursework are prescribed in Florida Statute 240.117 Rule 6A-10.0315, FAC. The score ranges used for placement into specific college preparatory courses as well as specific college level mathematics courses are determined institutionally and distributed annually to the college community in the form of the Placement Criteria Document. To be effective, the score ranges used for placement should adequately reflect the skill level required for the specific course curriculum. This capsule explores how well the placement score ranges serve the purpose of placing students into courses of appropriate difficulty.

Method

Information on first-time-in-college students was gathered from Institutional Research student data files using SAS programming. CPT scores, initial course placements, and end of course outcomes were recorded for each student. For the English and reading subject areas only Fall Term course records were included. Since many students postpone taking mathematics courses, course records for Winter Terms were also searched for this subject area to find as many students as possible enrolled in their first mathematics course.

Courses with at least 25 students enrolled from a given score range are included in the tables. Students auditing courses were excluded from the analysis, as were those with placement test scores for tests other than the CPT.

Results

Data presented in Tables 1 - 4 illustrate the success rate of students in each course by score range increments. Table 5 shows the CPT score ranges used for placement in 1996-1 and 1997-1. The placement ranges for reading, English, and college level mathematics were broken down further to explore any differences in passing rates for students scoring in the lower end of the range as opposed to the upper end.

Tables 1a and 1b show reading course results. For courses except REA 1105 the percent of students passing was higher in Fall Term 97-1 compared with Fall Term 96-1. The change in CPT score range used to place students into REA 0002 from 44-71 to 51-70 appears to have had a positive impact on the percent of students passing the course with 52% of total students passing in Fall Term 96-1 compared with 71% in Fall Term 97-1. For REA 0001, students scoring in the low end of the range (26-34) were much less likely to pass the course (47% passed in 96-1 and 53% in 97-1) than students scoring in the high end of the range (71% in 96-1 and 77% in 97-1).

Tables 2a and 2b show English course results. The percent of students passing all courses except ENC 1101 was higher in Fall Term 97-1 than in Fall Term 96-1. For ENC 0002 the score range was expanded from 26-47 for Fall Term 96-1 to 26-50 for Fall Term 97-1 with an accompanying increase in students passing from 48% to 68%. The score range for ENC 0020 was reduced from 48-77 for Fall Term 96-1 to 51-70 for Fall Term 97-1. Interestingly, even with this narrower range, the percent of students passing the course increased from 57% in 96-1 to 73% in 97-1. The statewide cut score used to exempt students from college preparatory courses was increased from 78 to 83; however, M-DCC had previously used a score of 89 to place students directly into college level English courses. Therefore, the cut score was effectively lowered for M-DCC students. This change resulted in a lower passing rate for students placed into ENC 1101 by their CPT scores (67% in Fall Term 96-1 and 65% in Fall Term 97-1).

Tables 3a and 3b show college preparatory mathematics placement results for Fall and Winter Terms 1996 and 1997. The score ranges used to place students into these courses were the same for both years but the percent of students passing each of the courses increased in 1997. The largest increase was observed in MAT 0024 (49% in 1996 to 58% in 1997).

Placement results for college level mathematics courses are shown in Tables 4a and 4b. The only change in the placement score ranges for these courses is in the 72-80 range where MGF 1113 was added as an alternative to placement in MAT 1033 for students testing on or after July 1, 1997. Very few first-time-in-college students were placed directly into MGF 1113 however. Modest increases in the percent of students passing MAT 1033 and MAC 1102 were observed from 1996 to 1997. Within the score ranges the percent passing each course increased as the score level increased. Less than half of the students who scored in the low end of the score range (61-71) and took MAT 1033 passed the course.

The new score ranges went into effect for students testing on or after July 1, 1997 and therefore a number of students were placed into courses using the 1996 score ranges. While the percent of students passing most courses increased in 1997, it is not clear whether the success rate was influenced primarily by the new score ranges or other factors (SLS enrollment, possible curriculum changes, etc.). The results presented here will be updated periodically for a continuing analysis of the use of the CPT in course placement decisions.

Joanne Bashford: ab

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Table 1a
College Preparatory Reading Placement 96-1*
Using the Computerized Placement Test
Percent Passing With 'S' or 'C' and Above

CPT Score		Course REA 0001	REA 0002	REA 1105
26 - 34	% Passed	***47%***		
	No. Placed	***250***		
35 - 43	% Passed	***71%***		
	No. Placed	***259***		
44 - 57	% Passed		***46%***	
	No. Placed		***628***	
58 - 71	% Passed		***57%***	65%
	No. Placed		***963***	26
72 - 77	% Passed			***68%***
	No. Placed			***381***
Total	% Passed	60%	52%	67%
	No. Placed**	531	1,641	427

*Excludes students auditing courses and courses with less that 25 students enrolled from score range.
**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 1b
College Preparatory Reading Placement 97-1*
Using the Computerized Placement Test
Percent Passing With 'S' or 'C' and Above

CPT Score		Course REA 0001	REA 0002	REA 0010	REA1105
26 - 34	% Passed	***53%***			
	No. Placed	***180***			
35 - 50	% Passed	***77%***	66%		
	No. Placed	***403***	91		
51 - 60	% Passed		***65%***		
	No. Placed		***469***		
61 - 70	% Passed		***77%***	79%	
	No. Placed		***599***	42	
71 - 82	% Passed		63%	***69%***	69%
	No. Placed		49	***536***	127
	% Passed	70%	71%	68%	67%
Total	No. Placed**	618	1,234	600	145

*Excludes students auditing courses and courses with less that 25 students enrolled from score range.
**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 2a
College Preparatory English Placement 96-1*
Using the Computerized Placement Test
Percent Passing With 'S' or 'C' and Above

CPT Score		Course			
		ENC 0002	ENC 0020	ENC 1130	ENC 1101
26 - 36	% Passed	***34%***			
	No. Placed	***209***			
37 - 47	% Passed	***59%***	39%		
	No. Placed	***233***	41		
48 - 62	% Passed		***52%***		
	No. Placed		***526***		
63 - 77	% Passed		***62%***	85%	
	No. Placed		***845***	34	
78 - 88	% Passed			***72%***	68%
	No. Placed			***753***	50
89+	% Passed				***67%***
	No. Placed				***1,181***
Total	% Passed	48%	57%	73%	67%
	No. Placed**	479	1,456	818	1,261

*Excludes students auditing courses and courses with less than 25 students enrolled from score range.
**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 2b
College Preparatory English Placement 97-1*
Using the Computerized Placement Test
Percent Passing With 'S' or 'C' and Above

CPT Score		Course				
		ENC 0002	ENC 0020	ENC 0021	ENC 1130	ENC 1101
26 - 36	% Passed	***56%***				
	No. Placed	***139***				
37 - 50	% Passed	***74%***	72%			
	No. Placed	***254***	43			
51 - 60	% Passed		***72%***			
	No. Placed		***254***			
61 - 70	% Passed		***73%***			
	No. Placed		***392***			
71 - 82	% Passed		76%	***64%***	81%	71%
	No. Placed		129	***430***	110	28
83+	% Passed				77%	***65%***
	No. Placed				93	***1,286***
Total	% Passed	68%	73%	63%	80%	65%
	No. Placed**	419	835	478	205	1,325

*Excludes students auditing courses and courses with less than 25 students enrolled from score range.
**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 3a

College Preparatory Mathematics Placement 1996* and Percent Passing with 'S' Using the Computerized Placement Test

Algebra Score	Arithmetic Score		Course MAT 0003 1996	MAT 0012 1996	MAT 0024 1996
20 - 45	19 - 29	% Passed	***38%***	25%	
		No. Placed	***436***	80	
	30 - 47	% Passed	***59%***	***32%***	
		No. Placed	***325***	***444***	
	48 - 120	% Passed	69%	***43%***	***42%***
		No. Placed	32	***72***	***663***
46 - 60	19 - 29	% Passed	***78%***		
		No. Placed	***27***		
	30 - 47	% Passed	***62%***	***62%***	
		No. Placed	***50***	***128***	
	48 - 120	% Passed		***68%***	***62%***
		No. Placed		***31***	***350***
	Total	% Passed	50%	40%	49%
		No. Placed**	882	770	1,049

*Data are for first Math course taken by first-time-in-college students Fall or Winter Terms of given year. Excludes students auditing courses, and courses with less than 25 students enrolled from score range.

**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

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Table 3b

College Preparatory Mathematics Placement 1997* and Percent Passing with 'S' Using the Computerized Placement Test

Algebra Score	Arithmetic Score		Course MAT 0003 1997	MAT 0012 1997	MAT 0024 1997
20 - 45	19 - 29	% Passed	***46%***	38%	
		No. Placed	***315***	53	
	30 - 47	% Passed	***57%***	***37%***	
		No. Placed	***127***	***357***	
	48 - 120	% Passed		***59%***	***51%***
		No. Placed		***56***	***404***
46 - 60	19 - 29	% Passed	***67%***		
		No. Placed	***27***		
	30 - 47	% Passed		***76%***	
		No. Placed		***88***	
	48 - 120	% Passed			***71%***
		No. Placed			***224***
	Total	% Passed	52%	46%	58%
		No. Placed**	499	597	674

*Data are for first Math course taken by first-time-in-college students Fall or Winter Terms of given year. Excludes students auditing courses, and courses with less than 25 students enrolled from score range.

**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 4a

College-Level Mathematics Placement 1996* and Percent Passing With 'C' or Above Using the Computerized Placement Test

Algebra Score		Course: MAT 1033 1996	MAC 1102 1996	MGF 1113** 1996
20 - 45	(Tested on Arithmetic and placed into College Preparatory)			
46 - 60	% Passed	29%		
	No. Placed	34		
61 - 71	% Passed	***41%***	41%	
	No. Placed	***366***	44	
72 - 80	% Passed	***56%***	33%	
	No. Placed	***203***	58	
81 - 90	% Passed	78%	***48%***	
	No. Placed	58	***152***	
91 - 100	% Passed	77%	***58%***	
	No. Placed	26	***127***	
101 - 110	% Passed		***67%***	
	No. Placed		***81***	
111 - 120	% Passed		***88%***	
	No. Placed		***32***	
Total	% Passed	50%	53%	
	No. Placed***	726	506	

*Excludes students auditing courses and courses with less than 25 students enrolled from score range.

**1996 data excluded due to less than 25 students placed from any score range.

***Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 4b

College-Level Mathematics Placement 1997* and Percent Passing With 'C' or Above Using the Computerized Placement Test

Algebra Score		Course: MAT 1033 1997	MAC 1102 1997	MGF 1113 1997
20 - 45	(Tested on Arithmetic and placed into College Preparatory)			
46 - 60	% Passed	20%		
	No. Placed	25		
61 - 71	% Passed	***48%***		
	No. Placed	***285***		
72 - 80	% Passed	***60%***		***44%***
	No. Placed	***127***		***36***
81 - 90	% Passed		***45%***	
	No. Placed		***147***	
91 - 100	% Passed		***64%***	
	No. Placed		***106***	
101 - 110	% Passed		***67%***	
	No. Placed		***91***	
111 - 120	% Passed		***92%***	
	No. Placed		***25***	
Total	% Passed	51%	57%	54%
	No. Placed**	464	418	72

*Excludes students auditing courses and courses with less that 25 students enrolled from score range.

**Total includes all students from all score ranges even if less than 25 enrolled from the score range.

Note: Students who were placed in appropriate courses based on the guidelines shown in Table 5 are highlighted in bold.

Table 5

1998-99 COURSE PLACEMENT GUIDE [1]

Students placing into college preparatory course work in one skill area are required to enroll concurrently in SLS 1505; two or more skill areas are required to enroll concurrently in SLS 1535.

CPT Scores	Placement Required	CPT Scores	Placement Required
Reading			
(Tested Before July 1, 1997)		***(July 1, 1997 - June 30, 1999)***	
26 - 43	[2]REA 0001	26 - 50	[2]REA 0001
44 - 71	REA 0002	51 - 70	REA 0002
72 - 77	REA 1105	71 - 82	REA 0010 *
78 - 120	None Required	83 - 120	None Required
100 - 120	[3]Honors Option	100 - 120	[3]Honors Option
Writing			
(Tested Before July 1, 1997)		***(Tested July 1, 1997 - June 30, 1999)***	
26 - 47	ENC 0002	26 - 50	ENC 0002
48 - 77	ENC 0020	51 - 70	ENC 0020
78 - 88	ENC 1130	71 - 82	ENC 0021 *
89 - 120	ENC 1101	83 - 120	ENC 1101
100 - 120	[3]Honors Option	100 - 120	[3]Honors Option
Mathematics			
Placement may be based on a combination of tests. Arithmetic scores are required for students scoring below the noted score on the Algebra test and determine placement for those students.			
(Tested July 1, 1996 - June 30, 1997)			
Algebra Scores	**Arithmetic Scores**		**Required Placement**
20 - 60 →	19 - 29		MAT 0003
	30 - 47		MAT 0003 or MAT 0012
	48 - 120		MAT 0012 or MAT 0024
61 - 80 →	**NO SECOND TEST**		**MAT 1033** **
81 - 120 →	**NO SECOND TEST**		**Recommended Placement** [4] MAC 1102, MGF 1113 or higher
(Tested July 1, 1997 - June 30, 1998)			
Algebra Scores	**Arithmetic Scores**		**Required Placement**
20 - 60 →	19 - 29		MAT 0003
	30 - 47		MAT 0003 or MAT 0012
	48 - 120		MAT 0012 or MAT 0024
61 - 71 →	**Not Required**		**MAT 1033** **
			Recommended Placement
72 - 80 →	**Not Required**		MAT 1033 or MGF 1113 **
81 - 120 →	**Not Required**		[4] MAC 1102, MGF 1113 or higher
(Tested on or AfterJuly 1, 1998)			
Algebra Scores	**Arithmetic Scores**		**Required Placement**
20 - 71 →	19 - 29		MAT 0003
	30 - 47		MAT 0003 or MAT 0012
	48 - 120		MAT 0012 or MAT 0024
			Recommended Placement
72 - 80 →	**Not Required**		MAT 1033 **
81 - 120 →	**Not Required**		[4] MAC 1102, MGF 1113 or higher

(1) Further assessment may be conducted in courses.
(2) Students scoring at this level must see an advisor prior to registering.
(3) If both scores meet these levels, student is eligible for Honors programs. Refer to appropriate office
(4) See Math advisor. Advanced mathematics test available on individual basis.
*New courses replacing REA 1105 and ENC 1130 for students testing in this score range on 7/1/97 and thereafter.
**MAT 1033 satisfies Math requirement only for students admitted prior to 96-1.

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